

## Metadata for Scotts Bluff National Monument, Spatial Vegetation Data: Cover type / Association level of the National Vegetation Classification System

### Identification\_Information:

#### Citation:

##### Citation\_Information:

Originator: U.S. Geological Survey

Originator: Department of the Interior

Publication\_Date: 199809

#### Title:

Scotts Bluff National Monument Spatial Vegetation Data: Cover type /  
Association level of the National Vegetation Classification System

Geospatial\_Data\_Presentation\_Form: Map

#### Series\_Information:

Series\_Name: USGS-NPS Vegetation Mapping Program

Issue\_Identification: Scotts Bluff National Monument

#### Publication\_Information:

Publication\_Place: Denver, CO

Publisher: USGS, Biological Resources Division, Center for Biological Informatics

#### Other\_Citation\_Details:

Created in large part by Environmental Systems Research Institute, Inc.  
Redlands, CA under contract rom USGS/BRD/CBI.

Online\_Linkage: [http://biology.usgs.gov/npsveg/scbl/index.html#geospatial\\_veg\\_info](http://biology.usgs.gov/npsveg/scbl/index.html#geospatial_veg_info)

### Description:

#### Abstract:

The vegetation units on this map were determined through the stereoscopic interpretation of aerial photographs supported by field sampling and ecological analysis. The vegetation boundaries were identified on the photographs by means of the photographic signature and collateral information on slope, hydrology, geography, and vegetation in accordance with the Standardized national Vegetation Classification System (October 1995). The mapped vegetation reflects conditions that existed during the specific year and season that the aerial photographs were taken. There is a margin of error inherent in the use of aerial photographs. Therefore, a detailed ground and historical analysis of a single site may result in a revision of the vegetation alliance boundaries established through photographic interpretation.

#### Purpose:

Provide National Parks with the necessary tools to effectively manage their natural resources.

### Time\_Period\_of\_Content:

#### Time\_Period\_Information:

##### Single\_Date/Time:

Calendar\_Date: 19950725

Currentness\_Reference: Source photography date

### Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

### Spatial\_Domain:

#### Bounding\_Coordinates:

West\_Bounding\_Coordinate: -103.74663

East\_Bounding\_Coordinate: -103.68121

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North\_Bounding\_Coordinate: 41.86887

South\_Bounding\_Coordinate: 41.80845

Description\_of\_Geographic\_Extent: Scotts Bluff National Monument and environs.

**Keywords:**

**Theme:**

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: vegetation classification

Theme\_Keyword: Standardized National Vegetation Classification

Theme\_Keyword: SNVCS

Theme\_Keyword: NVCS

Theme\_Keyword: alliance

Theme\_Keyword: community association

**Place:**

Place\_Keyword\_Thesaurus: None

Place\_Keyword: Nebraska

Place\_Keyword: NE

Place\_Keyword: Scottsbluff

Place\_Keyword: Gering

Place\_Keyword: Mitchell

Place\_Keyword: Mitchell Bottom

Place\_Keyword: North Platte River

Place\_Keyword: Roubadeau

Place\_Keyword: Scottsbluff County

Place\_Keyword: Scotts Bluff

**Taxonomy:**

**Keywords/Taxon:**

Taxonomic\_Keyword\_Thesaurus: None

Taxonomic\_Keywords: vegetation classification

Taxonomic\_Keywords: Standardized National Vegetation Classification System

Taxonomic\_Keywords: alliance

Taxonomic\_Keywords: community association

**Taxonomic\_Classification:**

Taxon\_Rank\_Name: Kingdom

Taxon\_Rank\_Value: Plantae

Applicable\_Common\_Name: plants

Access\_Constraints: None

**Use\_Constraints:**

Any person using the information presented here should fully understand the data collection and compilation procedures, as described in these metadata, before beginning analyses. The burden for determining fitness for use lies entirely with the user. For purposes of publication or dissemination, citations or credit should be given to the U.S. Geological Survey and the National Park Service.

**Point\_of\_Contact:**

**Contact\_Information:**

**Contact\_Person\_Primary:**

Contact\_Person: USGS-NPS Vegetation Mapping Program Coordinator

Contact\_Organization: USGS/BRD, Center for Biological Informatics

Contact\_Position: Geospatial Technology Specialist

**Contact\_Address:**

Address\_Type: Physical Address

Address: USGS Biological Resources

Address: Center for Biological Informatics

Address: Denver Federal Center, Building 810

Address: Room 8000, MS302

City: Denver

State\_or\_Province: CO

**USGS-NPS Vegetation Mapping Program**  
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Contact\_Facsimile\_Telephone: 303-202-4219 (org)

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**Browse\_Graphic:**

Browse\_Graphic\_File\_Name: <http://biology.usgs.gov/npsveg/scbl/images/scblveg.gif>

Browse\_Graphic\_File\_Description: 94 kbyte graphic image of map and key

Browse\_Graphic\_File\_Type: GIF

Native\_Data\_Set\_Environment: UNIX-Arc/Info

**Cross\_Reference:**

**Citation\_Information:**

Originator: USGSBRD, Center for Biological Informatics

Publication\_Date: 19980223

Title:

Vegetation Sampling and Classification of Scotts Bluff National Monument

Geospatial\_Data\_Presentation\_Form: report

**Data\_Quality\_Information:**

**Attribute\_Accuracy:**

**Attribute\_Accuracy\_Report:**

The mapped data were originally produced by Aerial Information Systems, under sub-contract to the Environmental Systems Research Institute. The data were revised by the contractor after the initial accuracy assessment was performed by re-interpreting some existing classes and adding two additional classes. A second revision was made by CBI personnel, changing interpretations of some classes with no further revisions in line work.

The raw accuracy assessment data can be downloaded at

[http://biology.usgs.gov/npsveg/ftp/vegmapping/scbl/reports/aa\\_data.txt](http://biology.usgs.gov/npsveg/ftp/vegmapping/scbl/reports/aa_data.txt). The contingency table derived from these data can be viewed at

[http://biology.usgs.gov/npsveg/scbl/aa\\_matrix.pdf](http://biology.usgs.gov/npsveg/scbl/aa_matrix.pdf)

**Logical\_Consistency\_Report:**

All polygon features are checked for topology using the ARC/INFO software.

Each polygon begins and ends at the same point with the node feature. All

nodes are checked for error so that there are no dangling features. There

are no duplicate lines or polygons. All nodes will snap together and close

polygons based on a specified tolerance. If the node is not within the

tolerance it is adjusted manually. The tests for logical consistency are

performed in ARC/INFO. All attribute codes and attributes have been checked for typographical and logical errors.

**Completeness\_Report:**

All data in the project area were photointerpreted and digitized. This

includes alliances/community association classes, density classes, height

classes, pattern groups, water, and unvegetated/landuse.

**Positional\_Accuracy:**

**Horizontal\_Positional\_Accuracy:**

**Horizontal\_Positional\_Accuracy\_Report:**

The vegetation spatial data were visually fitted in small (2 inch square

segments) to a custom-made orthophoto. The custom made orthophoto was

ground tested for horizontal accuracy in three locations in and

immediately adjacent to the park with Y-code (5 m accuracy) GPS with all

test points falling within +/- 4-6 meters of the corresponding image

location. The vegetation spatial data were test fitted to the orthophoto

using a 2nd order polygon transformation using GRASS (Geographical

Resources Analysis Support System) rectification software resulting in

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overall residuals of +/- 5 meters.

Vertical\_Positional\_Accuracy:

Vertical\_Positional\_Accuracy\_Report: Not applicable

Lineage:

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: Donahue Aerial Survey, Parker, CO

Publication\_Date: 19950725

Title:

Aerial photography (CIR and true color) of Scotts Bluff National Monument

Geospatial\_Data\_Presentation\_Form: image

Publication\_Information:

Publication\_Place: Denver, CO

Publisher: USGS Center for Biological Informatics

Other\_Citation\_Details:

Aerial photography was taken at a scale of 1:12,000. Original media are in the form of positive transparencies. Photointerpretation was done on contact prints of the true color photos.

Online\_Linkage: <http://biology.usgs.gov/npsveg/scbl/photos.html>

Source\_Scale\_Denominator: 12000

Type\_of\_Source\_Media: Contact paper prints of film transparencies

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 19950725

Source\_Currentness\_Reference: Imagery date

Source\_Citation\_Abbreviation: scbl Aerial Photos

Source\_Contribution: These aerial photographs were the basis for the photointerpretation process.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: County of Scottsbluff, Gering, NE

Publication\_Date: Unknown

Title: Digital Orthophotograph of Scotts Bluff National Monument

Geospatial\_Data\_Presentation\_Form: BIL digital file

Publication\_Information:

Publication\_Place: Gering, NE

Publisher: County of Scottsbluff

Other\_Citation\_Details:

Scotts Bluff orthophoto is part of a larger project by the county of Scottsbluff to produce a digital basemap for the cities of Scottsbluff and Gering and their immediate surroundings, including all of Scotts Bluff National Monument. The orthophoto was independently verified for horizontal accuracy by use of GPS-derived control points by USGS/BRD.

Type\_of\_Source\_Media: Cartridge Tape

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: Unknown

Source\_Currentness\_Reference: Imagery date

Source\_Citation\_Abbreviation: scbl orthophoto

Source\_Contribution: This digital orthophoto provided the project basemap

Source\_Information:

Source\_Citation:

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Citation\_Information:

Originator: USGSBRD, Center for Biological Informatics

Publication\_Date: 19980223

Title: Vegetation Sampling and Classification Report

Geospatial\_Data\_Presentation\_Form: report

Series\_Information:

Series\_Name: USGS-NPS Vegetation Mapping Program

Issue\_Identification: Scottsbluff National Monument

Publication\_Information:

Publication\_Place: Denver, CO

Publisher: USGS/BRD, Center for Biological Informatics

Other\_Citation\_Details:

This report was generated by The Nature Conservancy under contract to the USGS/BRD, Center for Biological Informatics

Online\_Linkage: <http://biology.usgs.gov/npsveg/scbl/methods.pdf>

Type\_of\_Source\_Media: digital

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 19980223

Source\_Currentness\_Reference: Ground Condition

Source\_Citation\_Abbreviation: scbl field data

Source\_Contribution: This document provides the Field Key, and Vegetation categories used in the mapping process.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: USGS/BRD, Center for Biological Informatics

Publication\_Date: 199411

Title: Accuracy Assessment Procedures, NBS/NPS Vegetation Mapping Program

Geospatial\_Data\_Presentation\_Form: document

Series\_Information:

Series\_Name: USGS-NPS Vegetation Mapping Program

Issue\_Identification: Scottsbluff National Monument

Publication\_Information:

Publication\_Place: Denver, CO

Publisher: USGS/BRD, Center for Biological Informatics

Other\_Citation\_Details:

This report was prepared by Environmental Systems Research Institute; Redlands, CA, National Center for Geographic Information and Analysis, University of California, Santa Barbara, CA and The Nature Conservancy, Arlington, VA under contract from the U.S. Department of Interior National Biological Survey and National Park Service.

Online\_Linkage: <http://biology.usgs.gov/npsveg/aa/aa.html>

Type\_of\_Source\_Media: electronic document

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 199411

Source\_Currentness\_Reference: publication date

Source\_Citation\_Abbreviation: Accuracy Assessment Procedures Documents

Source\_Contribution: This document established the procedures and protocols for the accuracy assessment at Scotts Bluff National Monument.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: U.S. Geological Survey

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Originator: Department of the Interior

Publication\_Date: 199810

Title:

Scotts Bluff National Monument Photo Interpretation and Map Generation Procedures

Geospatial\_Data\_Presentation\_Form: report

Series\_Information:

Series\_Name: USGS-NPS Vegetation Mapping Program

Issue\_Identification: Scotts Bluff National Monument

Publication\_Information:

Publication\_Place: Denver, CO

Publisher:

USGS, Biological Resources Division, Center for Biological Informatics

Other\_Citation\_Details:

Created in large part by Aerial Information Systems, Inc.  
under contract rom USGS/BRD/CBI.

Online\_Linkage: [http://biology.usgs.gov/npsveg/scbl/pi\\_rpt.pdf](http://biology.usgs.gov/npsveg/scbl/pi_rpt.pdf)

Type\_of\_Source\_Media: digital

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 199810

Source\_Currentness\_Reference: Report date

Source\_Citation\_Abbreviation: scbl mapping report

Source\_Contribution: Photo interpretation was done by trained interpreters familiar with the vegetation communities of the Monument on overlays registered to the aerial photographs under a stereoscope. Vegetation communities were identified n the basis of their color, pattern, texture, and location on the landscape and lines were drawn around the communities. The photo interpreters had visited the monument and conferred with the ecologists who performed the vegetation classification and were familiar with the vegetation communities. Not all vegetation associations could be identified on the photography due to size constraints and complexity of the vegetation. Map classes were assigned in these cases and a cross-walk was made to the vegetation classification

Process\_Step:

Process\_Description: Accuracy assesment field data collection was performed independently of the mapping effort. 512 field plots were taken which were then compared with the attributes of the spatial data. A contingency table was developed comparing the attributes of 21 vegetation map classes with the field data developed by the accuracy assesment.

Source\_Used\_Citation\_Abbreviation: AA Report

Process\_Date: 1994

Process\_Step:

Process\_Description: Aerial photography was taken of the Monument to serve as the basis for photo interpretation. Vegetation communities were identified on the aerial photography.

Source\_Used\_Citation\_Abbreviation: scbl Aerial Photos

Process\_Date: 1995

Process\_Step:

Process\_Description: Ortho imagery was developed to serve as a registration base to transfer the photo interpreted polygons. The ortho imagery is registered to locations on the surface of the earth and image distorttions due to terrain relief have been eliminated. When the polygons registered to the aerial photos have been transferred and registered to the ortho images the polygons are registered to locations on the surface of the earth and ternrain distortions have been eliminated.

Source\_Used\_Citation\_Abbreviation: scbl orthophoto

Process\_Date: Unknown

Process\_Step:

Process\_Description: Classification of the vegetation communities was performed by ecologists based on the field data that were collected. Compiled data are assembled into a single file and transformed mathematically to a common abundance scale. The element classification process is implemented using quantitative approaches of ordination, clustering, and correlation depending on the information available. Multivariate analysis programs are used to examine

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the floristic patterns and their relationships to measured environmental variables. Despite their utility in synthesizing large data sets, many of the analytical programs identify vegetation patterns that are statistically but not ecologically meaningful. The quantitative analysis to determine vegetation patterns must be carried out under the guidance and review of experts who have a practical understanding of the ecological relationships in the field.

Source\_Used\_Citation\_Abbreviation: scbl field data

Process\_Date: 1998

### Spatial\_Data\_Organization\_Information:

Direct\_Spatial\_Reference\_Method: vector

### Spatial\_Reference\_Information:

#### Horizontal\_Coordinate\_System\_Definition:

Planar:

Grid\_Coordinate\_System:

Grid\_Coordinate\_System\_Name: Universal Transverse Mercator

Universal\_Transverse\_Mercator:

UTM\_Zone\_Number: 13

Transverse\_Mercator:

Scale\_Factor\_at\_Central\_Meridian: 0.9996

Longitude\_of\_Central\_Meridian: -105

Latitude\_of\_Projection\_Origin: 0

False\_Easting: 500000

False\_Northing: 0

Planar\_Coordinate\_Information:

Planar\_Coordinate\_Encoding\_Method: coordinate pair

Coordinate\_Representation:

Abscissa\_Resolution: 1

Ordinate\_Resolution: 1

Planar\_Distance\_Units: meters

Geodetic\_Model:

Horizontal\_Datum\_Name: North American Datum of 1983

Ellipsoid\_Name: Geodetic Reference System 80

Semi-major\_Axis: 6378137

Denominator\_of\_Flattening\_Ratio: 298.257

### Entity\_and\_Attribute\_Information:

#### Overview\_Description:

##### Entity\_and\_Attribute\_Overview:

The National Vegetation Classification Standard is organized hierarchically to support conservation and resource stewardship applications across multiple scales. The upper levels of the hierarchy are based on the physical form or structure of the vegetation (physiognomy) and have been refined from the international standards developed by the United nations Educational, Scientific, and Cultural Organization (UNESCO). The two most detailed levels of the hierarchy are based on the species composition of existing vegetation (floristics) and reflect the phyto-sociological standards that were originally developed by European ecologists. The vegetation classification is continually advanced through the collection and analysis of new field data and will be greatly strengthened during the course of the USGS/NPS mapping efforts. Data file attributes include vegetation height, density, species, alliance, community element, and land cover.

#### HEIGHT

1=< 0.5 meters

2=0.5 - 2 meters

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3=2 - 5 meters  
4=5 - 15 meters  
5=15 - 35 meters  
6=35 - 50 meters  
7=> 50 meters  
9=Not Applicable

**DENSITY**

1=Closed/Continuous < 60%  
2=Discontinuous 40% - 60%  
3=Dispersed 25% - 40%  
4=Sparse 10% - 25%  
5=Rare 2% - 10%  
9=Not Applicable

**Pattern**

1,'Evenly Dispersed'  
2,'Clumped/Bunched'  
3,'Gradational/Transitional'  
4,'Alternating'  
9,'Not Applicable'

**Entity\_and\_Attribute\_Detail\_Citation:**

Grossman, D. Et al. 1994. National Park Service/ National Biological  
Service Vegetation Mapping Project, Standardized National Vegetation  
Classification System 209 pp.

**Distribution\_Information:**

**Distributor:**

**Contact\_Information:**

**Contact\_Person\_Primary:**

Contact\_Person: USGS-NPS Vegetation Mapping Program Coordinator

Contact\_Organization: USGS/BRD, Center for Biological Informatics

Contact\_Position: Geospatial Technology Specialist

**Contact\_Address:**

Address\_Type: Physical Address

Address: USGS Biological Resources

Address: Center for Biological Informatics

Address: Denver Federal Center, Building 810

Address: Room 8000, MS302

City: Denver

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Country: USA

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Contact\_Facsimile\_Telephone: 303-202-4229

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**Distribution\_Liability:**

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data in some way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The Biological Resources Division shall not be held liable for improper or incorrect use of the data described and/or contained herein.

#### Standard\_Order\_Process:

##### Digital\_Form:

##### Digital\_Transfer\_Information:

Format\_Name: HTML

##### Digital\_Transfer\_Option:

##### Online\_Option:

##### Computer\_Contact\_Information:

##### Network\_Address:

Network\_Resource\_Name: [http://biology.usgs.gov/npsveg/scbl/index.html#geospatial\\_veg\\_info](http://biology.usgs.gov/npsveg/scbl/index.html#geospatial_veg_info)

Fees: None

#### Metadata\_Reference\_Information:

Metadata\_Date: 20011022

Metadata\_Review\_Date: 20060906

#### Metadata\_Contact:

##### Contact\_Information:

##### Contact\_Organization\_Primary:

Contact\_Organization: USGS-NPS Vegetation Mapping Program Coordinator

##### Contact\_Address:

Address\_Type: mailing and physical address

##### Address:

U.S. Geological Survey, Center for Biological Informatics, MS 302,

Room 8000, Building 810, Denver Federal Center

City: Denver

State\_or\_Province: Colorado

Postal\_Code: 80225

Country: USA

Contact\_Voice\_Telephone: (303) 202-4220

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Contact\_Electronic\_Mail\_Address: [gs-b-npsveg@usgs.gov](mailto:gs-b-npsveg@usgs.gov)

Metadata\_Standard\_Name: FGDC-STD-001.1-1999 Content Standard for Digital Geospatial Metadata, 1998 Part 1: Biological Data Profile, 1999

Metadata\_Standard\_Version: FGDC-STD-001-1998

#### Metadata\_Extensions:

Online\_Linkage: <http://biology.usgs.gov/fgdc.bio/bionwext.txt>

Profile\_Name: Biological Data Profile FGDC-STD-001.1-1999